

# **SYSTEMS AND METHODS USING NIC-BASED PREFETCHING FOR HOST TCP CONTEXT LOOKUP**

## **ABSTRACT OF THE DISCLOSURE**

Systems and methods using network interface card-based (NIC-based) prefetching  
5 for host TCP context lookup are disclosed. The process generally includes hashing, by  
the NIC, a packet received over the network, computing a host hash table cache line in a  
host memory using the hash value and using a hash table pages table containing host  
memory physical page addresses of a host hash table, and computing a host context table  
cache line in a host memory using the hash value and using a context table pages table  
10 containing host memory physical page addresses of a host context table. The NIC may  
be initialized with the hash table pages table and the context table pages table as well as  
with the a set number of hash node entries in the hash table of the host memory.